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# Pachymeningitis—Myxedema.

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# *PACHYMENINGITIS—MYXEDEMA.**

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Gentlemen:—This little girl, seven years old, had measles just before Christmas—at the same time that a brother and sister had the same disease. They were all decidedly ill, but made a good recovery. Some little time after getting about, this girl had earache, and later a discharge from the ear, and pined considerably, having poor color, little appetite, some fur on the tongue, and some acceleration of the pulse. Under tonics containing

* Delivered at the Medico-Chirugical College, Philadelphia, March 6, 1893.

iron, quinine and strychnine, with local treatment for the ear, she got well enough to begin school again, and seemed, according to the observations of her parents, entirely restored. On the second day of March, eighteen days ago, she came home from school with considerable headache. Next day she still had the same symptom, and vomited several times. She went on in this way until I saw her on the 7th of March, the headache having persisted almost constantly, day and night, and the vomiting having been so frequent that all the food and domestic remedies which had been administered had been rejected.

You will please note the fact that such continued and severe headache, especially when occurring in a child, should always excite suspicion of an intra-cranial lesion. I forgot to say that the child had complained also of some little pain in the ear several times when the headache first began. When I first saw her the patient had passed but little water for a few days, and that was very muddy looking and concen-

trated. The bowels had not moved. The child was listless and dull; seemed annoyed by any disturbance, and showed signs of pain on being touched—there was hyperesthesia. There was no hot head; the skin, though a little dry, was not hot. The temperature was 101½° F. I pronounced the case cerebral meningitis.

Remember that when we qualify meningitis as cerebral, that we use the term in contradistinction to spinal. The meningitis s limited to the membranes of the brain, not necessarily to that part of them which cover the cerebrum. I also believe this to be a case of that variety which is called pachymeningitis—affecting the dura, because it was probably set up by a chronic inflammatory process in the ear—an extension inward, so to speak. Besides, the rather slow, almost subacute process, would indicate that at least the principal part of the inflammation has fallen on the external membrane. Then you will see, as I say more about the case, that the symptoms of compression, which would

have been likely to be prominent, if the serous membrane and the vascular membrane—the pia-arachnoid had been much affected, have not been so marked in this case.

Now let me say more about the progress of the case, and how it was treated. On my first visit I prescribed several 3 grain doses of calomel, at intervals of 4 hours, to be followed by and alternated with drachm doses of rochelle salt. After purgation, this was to be followed by sodium bromide, gr. iv., with ext. ergot. fld., gtt. v., every four hours. Ice in small pieces was ordered to be given for the vomiting, constantly or as freely as the child would take it. A mustard plaster was ordered, first to the back of the neck and then to the stomach. The room was to be kept darkened, all noise and excitement avoided, and milk and broths only to be given when the stomach had settled.

I found next day that practically everything had been rejected; there had been no action of the bowels, and but little urine

passed. The headache still continued, the pulse was 120, the abdomen somewhat retracted, and the mind apathetic. An enema was given, which acted promptly. The hair was cropped off closely, and the ice-cap applied. From this time forward there was no more vomiting, but the headache was always present when the patient was awake, and sufficiently conscious to speak of her symptoms. She was for the most part not deeply comatose; she could nearly always be easily aroused, and when spoken to or handled, showed signs of irritation and annoyance. The actual hyperesthesia, however, was not so marked after the end of the first week. The temperature was seldom above 102° F., and the pulse was down below a hundred for several days, about the end of the first week. The urine was at this time sufficient in quantity, and of good color, and though sometimes voided into the bed, generally passed into a vessel. The bowels were a few times evacuated, apparently without her knowledge, but generally this was not the case.

She continued to get such medicines as ergot, bromides, some chloral, mercurials, and iodide of potassium.

In this way the case wore on, occasionally the symptoms somewhat remitting, so that hopes of recovery seemed to be justified. But for the last three days she has been sinking steadily. The pulse has been 150, and even more frequent; there has been something like an approach to the Cheyne-Stokes type of breathing at times. Now you see her with a pinched, pale face, feeble respiration, and a pulse of 116. You see the pulse has slowed again; it is small, almost thready. The temperature is up to 105° F., and will no doubt steadily rise till some time after death, which I confidently expect to occur within some four or five hours. The pupils are dilated. They have generally been contracted in the course of the disease, You will notice that the feet roll in, a sign of special weaknsss of the outward rotators of the thigh; there are no superficial reflexes present. In this case there has

been no retraction of the head, and there has been but little paralysis.

The next case I show you associates several very interesting conditions, and more or less obscure still, as they have not been much studied until within the last few years. The woman is 52 years old. About ten weeks ago, after she had nursed a daughter through an attack of typhoid fever, and was worn down somewhat from this cause, she sustained a severe nervous shock, and probably some physical injury, although the latter was insignificant. I want you to note especially the condition of previous depression, and the emotional cause, fright. She was crossing the street, when an explosion of some kind shattered, and hurled about her and probably against her, the plate off a manhole. The explosion was accompanied by a noise like a pistol-shot. She fell to the ground dazed. She was helped into a drug-store near by, when it was found that the right knee was slightly bruised and cut, and she felt as if the right side of her face had been

struck, but there was nothing to be seen but a superficial redness. She spent several hours at the drug store, very much agitated and confused, but at the end of that time took a street car and rode within a square of her home. She had been helped on and off the car, but was not further accompanied.

She went to bed, and her physician, Dr. Snively, found her pulse about 130, and this rapid rate has ever since continued, in spite of all special medication looking to its reduction. For about two weeks she was so helpless that she could not get out of bed alone, and slept poorly. She had great soreness and pain, with a feeling of stiffness in the muscles of all parts of the body.

At the end of this time the involuntary, convulsive movements, which you now see, commenced, and about the same time the thyroid gland began to enlarge, and the legs grew hard and thick, looking like edematous parts; but, as you see, when I press on them, no pitting occurs. It is

also evident that the skin is not especially affected, but rather the subdermal parts. It is therefore a myxedema, not a sclero-derma, nor an ordinary edema from effusion of serum into the connective tissue. Instead of serum, a mucoid substance has been deposited in the areolar spaces, and in the connective-tissue generally. The connective-tissue corpuscles have also proliferated. A slight amount of this same condition is present in the tissues about the eyebrows, which, by the way, is a favorite situation for its development. When marked here, and in the rest of the face, it gives a peculiar, heavy expression to the patient.

The convulsive movements, you see, are very extensive and irregular in seat and distribution. Nearly all the muscles seem to be jerking, more or less; but now the movements are most in the lower limbs, or in one of them alone, now in the arm, now in the face or neck muscles, and so on. They might be called a very coarse tremor, or a convulsive tremor. They are

not as writhing as choreic movements, and less in range; they are not as rhythmical as the tremor of paralysis agitans and wider in range; they are less jerky than the incoördination of Charcot's disease. The knee-jerk is exaggerated, and there is ankle-clonus. Pressure on almost any muscle, or a light tap, produces, as you see, a distinct clonus. Such a condition as this has been named myoclonus multiplex.

This case is one of remarkable interest. The combination of conditions is unique. You have the large thyroid and rapid pulse which occur in exophthalmic goitre; but the prominence of the eyes is lacking. Then the myxedema and myoclonus multiplex associated with these. The relations of myxedema with thyroid degeneration or extirpation of the thyroid gland should be kept in mind. Generally, it is true, we have atrophy of the gland; but then a degeneration of an organ, even if the volume is increased by the presence of connective-tissue at the expense of the parenchyma.

will have functional consequences equivalent to primary atrophy.

The relations of all these diseases, which are here at least partially exemplified, to depressing emotions as a cause, is a point which I hope has not escaped you. This woman was depressed, and in that condition was terribly frightened, and the result is what you see. Such cases teach a most valuable lesson in the correlation of diseases.

As to treatment, it has been found that electricity is most valuable in controlling the myoclonus. I will order a current of voltaic electricity which she can distinctly feel; probably it will be about six or eight cells, to be used once a day. The positive pole can be put to the cervical region of the spine, the negative for a few minutes to one foot, then the same length of time to the other; then in the same way to the hands, making the application for about fifteen minutes in all.* I will give a pill

* After a week's use of this treatment she had materially improved, the tremor being much diminished, the edema less, and the pulse slowed to 110.

containing gr. ¼ of ext. cannabis indica, three times a day. She must have the whole body gently rubbed every day. Her diet must be highly nutritious, but carefully regulated and adapted to her digestive capacity. Her bowels must be kept open, and her clothing must be warm and comfortable, but not oppressive. She should be kept free from mental excitement, and must rest in bed.

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